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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/545,834	04/10/2000	Shuhei Harada	Q58793	3167
7590 06/21/2005			EXAMINER	
Sughrue Mion Zinn Macpeak & Seas 2100 Pennsylvania Avenue NW Washington, DC 20037-3202			TRAN, LY T	
			ART UNIT	PAPER NUMBER
			2853	
DATE MAILED: 06/21/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

**Office Action Summary**

Application No.

09/545,834

Applicant(s)

HARADA ET AL.

Examiner

Ly T. TRAN

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
 Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on REC filed 5/26/05.  
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-70, 72-87 and 89-91 is/are pending in the application.  
 4a) Of the above claim(s) 2, 3, 6-32, 42-65 and 75-79 is/are withdrawn from consideration.  
 5) ☒ Claim(s) 1, 4, 5, 33-41, 57, 66-70, 72-74, 80-87 and 89 is/are allowed.  
 6) ☒ Claim(s) 90 and 91 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 5/26/05  
 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_  
 5) ☐ Notice of Informal Patent Application (PTO-152)  
 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/26/05 has been entered.

### ***Election/Restrictions***

2. Applicant's election without traverse of species in Paper No. 11 is acknowledged.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 90 and 91 are rejected under 35 U.S.C. 102(e) as being anticipate by Hoen et al (USPN 6,325,354).

With respect to claims 90 and 91, Hoen et al. discloses an ink jet recording comprising: an recording head/a first ink storage (Fig.1: element 15), an ink storage/a second ink storage (Fig.1: element 13) for storing ink to be supply to the recording head/a first ink storage (Element 15), an ink flow path passage (Element 17) communicating the ink storage unit and the recording head, a valve unit for opening/closing the ink flow path, the valve unit including a valve control chamber (Fig.4: element 111) which constitutes a part of the ink flow path, the valve control chamber including an entrance port (Fig.4: element 117) and an exit port (Fig.4: element 115), a flexible diaphragm (Fig.4: element 127) which constitutes a part of the valve control chamber and an actuator body (Element 125) fixed with the diaphragm, the actuator body being adapted to deform the diaphragm such that the only exit port (Fig.4: the bottom of 115) is closed by the diaphragm and the actuation body closes the exit port when a negative pressure is applied to the valve control chamber (See figure 4).

***Allowable Subject Matter***

4. Claims 1, 4, 5, 33-41,57, 66-70, 72-74, 80-87 and 89 are allowed.

The primary reason for the allowance of claims 90 and 89 is the inclusion of the limitation of an ink jet recording apparatus comprising an actuator having a single rod-shaped fixed with the diaphragm, the actuator being adapted to be actuated in an axial direction of the rod-shaped body to deform the diaphragm such that only the exit port is closed by the diaphragm. It is limitation found in each claims, as it is claimed in the

combination, that has not been found, taught, or suggested by the prior art of record which makes these claims allowable over the prior art.

### ***Response to Arguments***

5. Applicant's arguments filed 5/26/05 have been fully considered but they are not persuasive.

Applicant's argument that Hoen fails to teach the diaphragm being deformable such that only the exit port is closed by the diaphragm when a negative pressure is applied to the valve control chamber is not persuasive because refer to figure 4, the diaphragm (125) being deformable (125 extends toward the bottom of 115) such that only the exit port (bottom of 115) is closed by the diaphragm when a negative pressure is applied to the valve control chamber (111,113).

### ***Conclusion***

This is a continuation of applicant's earlier Application No. 09/545,843. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ly T. TRAN whose telephone number is 571-272-2155. The examiner can normally be reached on M-F (7:30am-5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LT

June 16, 2005



Stephen D. Meier  
Primary Examiner